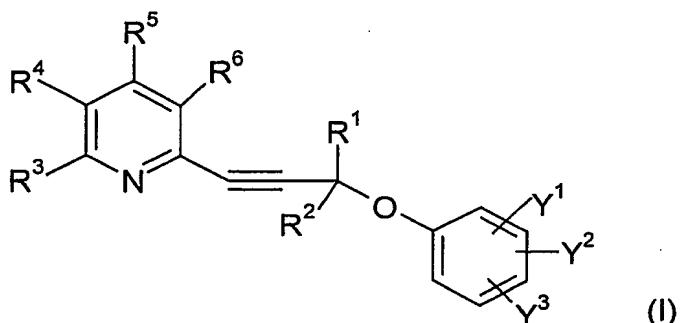


Claims

1. A compound of formula I



5

wherein

R¹ is selected from hydrogen, C₁-C₄ alkyl, C₃-C₆ cycloalkyl, aryl and heteroaryl, wherein the aryl or heteroaryl may be substituted by C₁-C₄ alkyl;

10

R² is selected from hydrogen and C₁-C₄ alkyl;

R³ is selected from hydrogen, C₁-C₄ alkyl, F, CF₃, CHF₂ and CH₂F;

R⁴ is selected from hydrogen, F, CF₃, CHF₂, CH₂F and CH₃;

R⁵ is selected from hydrogen and F;

R⁶ is selected from hydrogen and F;

15

Y¹ is selected from hydrogen; halogen; nitrile; C₁-C₄ alkoxy; C₁-C₄ alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; benzyloxy; nitro in the meta or para position; and C₁-C₄ alkyl ester;

Y² is selected from hydrogen; halogen; nitrile; C₁-C₄ alkoxy; C₁-C₄ alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; and C₁-C₄ alkyl ester;

20

Y³ is selected from hydrogen; halogen; nitrile; C₁-C₄ alkoxy; C₁-C₄ alkyl wherein one or more of the hydrogen atoms of the alkyl group may be substituted for a fluorine atom; and C₁-C₄ alkyl ester; or

25

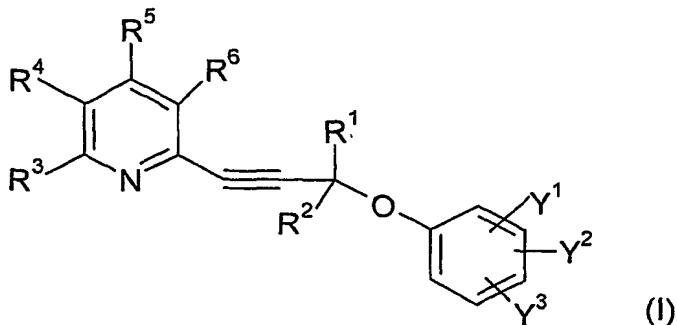
Y¹ and Y² may form an aromatic or non-aromatic ring, optionally substituted by halogen, nitrile, C₁-C₄ alkoxy, C₁-C₄ alkyl wherein one or more of the hydrogen

atoms of the alkyl group may be substituted for a fluorine atom, benzyloxy or C₁-C₄ alkyl ester;

with the proviso that when Y¹ is hydrogen, Y² is selected from halogen, nitrile, C₁-C₄ alkoxy, and C₁-C₄ alkyl;

5 as well as pharmaceutically acceptable salts, hydrates, isoforms and/or optical isomers thereof.

2. A compound of formula I



10

wherein

R¹ is selected from hydrogen, C₁-C₄ alkyl, C₃-C₆ cycloalkyl, aryl and heteroaryl, wherein the aryl or heteroaryl may be substituted by C₁-C₄ alkyl;

15

R² is selected from hydrogen and C₁-C₄ alkyl;

R³ is selected from hydrogen, C₁-C₄ alkyl, F, CF₃, CHF₂ and CH₂F;

R⁴ is selected from hydrogen, F, CF₃, CHF₂, CH₂F and CH₃;

R⁵ is selected from hydrogen and F;

R⁶ is selected from hydrogen and F;

20

Y¹ is selected from hydrogen, halogen, nitrile, C₁-C₄ alkoxy, and C₁-C₄ alkyl;

Y² is selected from hydrogen, halogen, nitrile, C₁-C₄ alkoxy, and C₁-C₄ alkyl;

Y³ is selected from hydrogen, halogen, nitrile, C₁-C₄ alkoxy, and C₁-C₄ alkyl;

with the proviso that when Y¹ is hydrogen, Y² is selected from halogen, nitrile, C₁-C₄ alkoxy, and C₁-C₄ alkyl;

as well as pharmaceutically acceptable salts, hydrates, isoforms and/or optical isomers thereof.

3. A compound according to formula I of claim 1 or 2, wherein

5 R¹ is hydrogen or C₁-C₃ alkyl;

R² is hydrogen;

R³ is selected from hydrogen and C₁-C₂ alkyl;

R⁴ is hydrogen;

R⁵ is hydrogen;

10 R⁶ is hydrogen;

Y¹ is selected from hydrogen, chloro, C₁-C₂ alkoxy, and C₁-C₂ alkyl; and

Y² is selected from hydrogen, chloro, C₁-C₂ alkoxy, and C₁-C₂ alkyl;

with the proviso that when Y¹ is hydrogen, Y² is selected from chloro, C₁-C₂ alkoxy, and C₁-C₂ alkyl; and

15 Y³ is hydrogen.

4. A compound according to claim 1 selected from;

2-[3-(3-methoxyphenoxy)prop-1-yn-1-yl]-6-methylpyridine;

2-[3-(3-methoxyphenoxy)prop-1-yn-1-yl]pyridine;

20 2-[3-(3-chlorophenoxy)but-1-yn-1-yl]-6-methylpyridine;

2-Methyl-6- (3-p-tolyloxy-prop-1-ynyl)-pyridine;

2-[3-(2,3-Dichloro-phenoxy)-prop-1-ynyl]-6-methyl-pyridine;

2-[3-(2,3-Dimethyl-phenoxy)-prop-1-ynyl]-6-methyl-pyridine;

2-[3-(2,3-Dimethyl-phenoxy)-prop-1-ynyl]-6-methyl-pyridine;

25 2-[3-(2,4-Dichloro-phenoxy)-prop-1-ynyl]-6-methyl-pyridine;

2-[3-(2,4-Dimethyl-phenoxy)-prop-1-ynyl]-6-methyl-pyridine;

2-[3-(2,5-Dichloro-phenoxy)-prop-1-ynyl]-6-methyl-pyridine;

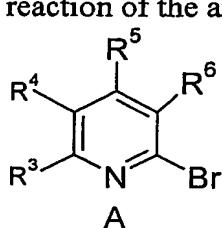
2-[3-(2,5-Dimethyl-phenoxy)-prop-1-ynyl]-6-methyl-pyridine;

2-[3-(2,6-Dimethyl-phenoxy)-prop-1-ynyl]-6-methyl-pyridine;

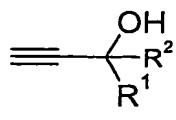
30 2-Methyl-6- [3-(2-trifluoromethyl-phenoxy)-prop-1-ynyl]-pyridine;

2-[3-(2-Benzyl-oxo-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-[3-(2-Bromo-4, 5-dimethyl-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-[3-(2-Chloro-4-methoxy-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-[3-(2-Chloro-5-methyl-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
5 2-[3-(2-Chloro-6-methyl-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-Methyl-6- (3-o-tolyloxy-prop-1-ynyl)-pyridine;
2-Methyl-6- [3-(3,4,5-trimethyl-phenyl)-prop-1-ynyl]-pyridine;
2-[3-(3,4-Dichloro-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-[3-(3,4-Dimethoxy-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
10 2-[3-(3,4-Dimethyl-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-[3-(3,5-Dichloro-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-[3-(3,5-Dimethoxy-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-[3-(3,5-Dimethyl-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-[3-(3-Bromo-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
15 3- [3- (6-Methyl-pyridin-2-yl)-prop-2-ynyl]-benzonitrile;
2-[3-(3-Ethyl-phenyl)-prop-1-ynyl]-6-methyl-pyridine;
2-methyl-6-[3-(3-methylphenoxy)prop-1-yn-1-yl]pyridine;
2-[3-(4-chloro-2-methylphenoxy)prop-1-yn-1-yl]-6-methylpyridine;
2-[3-(4-chloro-3,5-dimethylphenoxy)prop-1-yn-1-yl]-6-methylpyridine;
20 2-[3-(4-chloro-3-methylphenoxy)prop-1-yn-1-yl]-6-methylpyridine;
2-[3-(4-chlorophenoxy)prop-1-yn-1-yl]-6-methylpyridine;
2-[3-(4-methoxyphenoxy)prop-1-yn-1-yl]-6-methylpyridine;
2-methyl-6-[3-(4-nitrophenoxy)prop-1-yn-1-yl]pyridine;
25 2-methyl-6-[3-(3-nitrophenoxy)prop-1-yn-1-yl]pyridine;
2-methyl-6-[3-(3-methylphenoxy)prop-1-yn-1-yl]pyridine;
2-methyl-6-[3-(5,6,7,8-tetrahydronaphthalen-2-yloxy)prop-1-yn-1-yl]pyridine;
2-[3-(4-isopropylphenoxy)prop-1-yn-1-yl]-6-methylpyridine;
2-[3-(4-*tert*-butylphenoxy)prop-1-yn-1-yl]-6-methylpyridine;
30 6-[3-(3,4-dimethylphenoxy)prop-1-yn-1-yl]-3-fluoro-2-methylpyridine; and
6-[3-(3,4-dimethylphenoxy)but-1-yn-1-yl]-3-fluoro-2-methylpyridine.

5. A compound according to any one of claims 1-4 for use in therapy.
6. A compound according to claim 5, wherein the therapy is treatment or prevention
of gastroesophageal reflux disease.
7. Use of a compound according to formula I of claim 1 or 2, or a pharmaceutically acceptable salt or an optical isomer thereof, for the manufacture of a medicament for the inhibition of transient lower esophageal sphincter relaxations.
- 10 8. Use of a compound according to formula I of claim 1 or 2, or a pharmaceutically acceptable salt or an optical isomer thereof, for the manufacture of a medicament for treatment or prevention of gastroesophageal reflux disease.
- 15 9. A pharmaceutical composition comprising a compound of formula I of claim 1 or 2 as an active ingredient, together with a pharmacologically and pharmaceutically acceptable carrier.
- 20 10. A process for the preparation of a compound of formula I, whereby a coupling reaction of the aryl bromide A

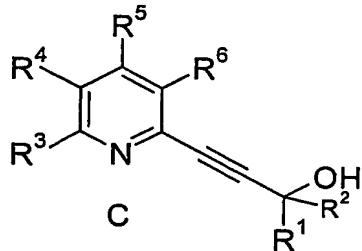


and the alcohol B

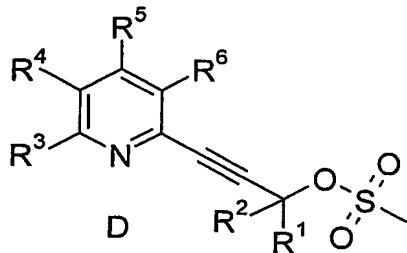


B

25 is performed in the presence of a base such as triethyl amine to give the alcohol C



which is then converted into the mesylate D



and reacted with an alcohol, and wherein

R¹ is selected from hydrogen, C₁-C₄ alkyl, C₃-C₆ cycloalkyl, aryl and heteroaryl, wherein the aryl or heteroaryl may be substituted by C₁-C₄ alkyl;

R² is selected from hydrogen and C₁-C₄ alkyl;

R³ is selected from hydrogen, C₁-C₄ alkyl, F, CF₃, CHF₂ and CH₂F;

R⁴ is selected from hydrogen, F, CF₃, CHF₂, CH₂F and CH₃;

R⁵ is selected from hydrogen and F;

R⁶ is selected from hydrogen and F.

11. A compound selected from 3-(5-fluoro-6-methylpyridin-2-yl)prop-2-yn-1-ol; 4-(5-fluoro-6-methylpyridin-2-yl)but-3-yn-2-ol; 3-(5-fluoro-6-methylpyridin-2-yl)prop-2-yn-1-yl methanesulfonate; 3-(5-fluoro-6-methylpyridin-2-yl)-1-methylprop-2-yn-1-yl methanesulfonate; 4-(6-methylpyridin-2-yl)but-3-yn-2-ol; and Methanesulfonic acid 1-methyl-3-(6-methyl-pyridin-2-yl)-prop-2-ynyl ester.

12. A method for the inhibition of transient lower esophageal sphincter relaxations whereby an effective amount of a compound of formula I of claim 1 or 2 is administered to a subject in need of such inhibition.
- 5 13. A method for the treatment or prevention of gastroesophageal reflux disease, whereby an effective amount of a compound of formula I of claim 1 or 2 is administered to a subject in need of such treatment or prevention.